

REMARKS

Claims 51-56 were pending in this application. The Examiner made the following rejections:

- (1) The Examiner objects to informalities in the Drawings.
- (2) The Examiner objects to an informality in the Specification.
- (3) The Examiner alleges lack of antecedent support in the Specification.
- (4) The Examiner objects to an informality in the Claims.
- (5) The Examiner rejects claim 53 in view of 35 U.S.C. 112.
- (6) The Examiner rejects claims 51 & 53-56 under 35 U.S.C. 102(b).
- (7) The Examiner rejects claim 52 under 35 U.S.C. 103(a).

The Applicants believe the present amendments, and the following remarks, traverse the Examiner's rejections. These remarks are presented in the same order as they appear above.

(1) Figure 7 is Amended

The Applicants have attached, to the instant paper, proposed changes to Figure 7. Specifically, Applicants have amended the depiction of the seal **10** such that the mounting ring **20** and the seal ring **30** are drawn with the accepted symbol for synthetic resin or plastic (as set out in MPEP 608.02). As per MPEP 608.02(p) the Applicants have attached to the instant correspondence: i) an annotated sheet showing changes made to Figure 7 and, ii) a replacement sheet for Figure 7. The Applicants will wait for the Examiner to render a decision regarding the adequacy of these proposed changes. That is to say, only if the Examiner approves these proposed changes will the Applicants forward a substitute formal drawing incorporating the same.

(2) Applicants Have Addressed The Informalities In The Specification

The Applicants have annotated the description at page 16, of the application as filed, to reference the relevant figures and element numbers. No new matter is added by way of these amendments as all enumerated elements are defined in other sections of the application as filed.

(3) The Specification Provides Antecedent Support For The Claim Terms

The Examiner alleges that the following phrases, from pending claim 51, lack proper antecedent basis in the detailed description of the invention: i) “protrusions extending outward from the (contact) surface” and ii) “said second surface being substantially flat”. As a threshold

objection the Applicants note that any part of the specification may provide antecedent support for a claim term. That is to say, antecedent support for claim terms is not confined just to the section of the application entitled "Detailed Description of the Invention". Notwithstanding this observation, however, the Applicants provide ample support for the phrases in question. Specifically, the Applicants support the claim phrase "protrusions extending outward from the (contact) surface" in the following sections of the application as filed:

"The term 'protrusion' as used herein refers to a bump, bulge, hump, lump, knob of various shapes and sizes that extends upward and/or outward from the plane of the contact surface." (See, p. 8, ll.1-3 of the application as filed)

and,

"Referring now to FIG. 3 which shows the geometrical relationships between the various dimensions of the protrusions and the recesses formed therein, the spacing between successive protrusions is designated as d1. The depth of a recess is designated as d2. *The height of the protrusion measured above the contact surface is designated as d3.* The diameter of a protrusion having a circular cross sectional configuration is designated as d4. The diameter of a recess having a circular cross sectional configuration is designated as d5. In the preferred embodiment, each protrusion has a cylindrical shape and a circular cross sectional configuration." (See, p. 11, ll. 5-12 of the application as filed - -emphasis added- -)

Therefore it is clearly ascertainable from the specification that, in the claimed embodiments of the present invention, the protrusion extend outward from the contact surface. Similarly, the Applicants support the claim phrase "said second surface being substantially flat" in the following sections of the application as filed:

"The present invention also contemplates an assembly, comprising a first surface having an outer peripheral edge and textured features interior to said outer peripheral edge, with a second surface, said second surface being substantially flat and pressed against said first surface to produce a seal." (See, p. 4, ll.9-12 of the application as filed)

and,

“In this example, a seal was biased against a *flat glass plate* and a video camera was used to continuously monitor the seal wear band in real time.” (See, p. 14, ll.12-13 of the application as filed - -emphasis added- -)

Once again it is clearly ascertainable from the specification that, in the claimed embodiments of the present invention, the second surface is substantially flat.

(4) The Applicants Address Informalities In The Claims

The Applicants have amended claim 51 to address the grammatical objection raised by the Examiner.

(5) Claim 53 Is Compliant With 35 U.S.C. 112 (Second Paragraph)

The Applicants have amended claim 53 by inserting the transitional phrase appropriate to introduce a Markush group.

(6) Grorich Does Not Anticipate

Claims 51 and 52-56 are rejected under 35 U.S.C. § 102(b) as being anticipated by Grorich. The Examiner is reminded that the standard for anticipation is satisfied only when a single prior art reference discloses each and every element of the claimed invention. *See RCA Corp. v. Applied Digital Data Systems, Inc.*, 730 F.2d 1440, 221 USPQ 385 (Fed. Cir. 1984). Turning to the art submitted by the Examiner, the Applicants respectfully submit that U.S. patent 3,973,781 to Grorich does not satisfy the standard for anticipation under 35 U.S.C. § 102(b).

In view of Grorich, the Examiner provides a recitation of elements that allegedly overlap with the subject matter claimed in the instant application. The Examiner, however, has overlooked elements that are clearly unique to the device claimed in the instant application.

Specifically, the Examiner asserts¹ that Grorich describes, in Fig. 1c, that “the contact surface further comprising integral protrusions (see also ‘facets’ in col. 11, line 38) disposed interior to the outer peripheral edge.” The Applicants respectfully submit the Examiner misapprehends the “facets” disclosed in the '781 patent. Specifically, the '781 patent does *not* disclose protrusions as defined in the present specification. Instead, the '781 patent teaches that,

"[t]he contact surface has an array of facets formed by a multiplicity of oblique frustopyramids. Each frustopyramid has a rhombic base. The long diagonal of the rhombic base is parallel to the seal edge. Each frustopyramid has also a smaller geometrically similar rhombic top surface for contact with the rotary machine

¹ Office Action mailed July 05, 2005, page 4, paragraph 8.

part. The frustopyramids are arranged side by side symmetrically with respect to an axial plane through the short diagonal of one of the rhombic surfaces. *The rhombic top surface is so located in relation to the respective rhombic base that an edge of each frustopyramid which faces the seal edge is substantially normal to the contact surface and to the surface of the rotary machine part to be contacted.*² (emphasis added).

Therefore, the rhombic top surfaces of the “facets” of the alleged protrusions in the ‘781 patent are actually the *contact* surface for all the seal assemblies described by Grorich. That is to say, if the apex of the frustopyramids define the sliding (contact) surfaces 2 of the seal, then the ‘781 patent *fails to disclose any protrusion* which extends outward from the contact surface.

In contrast to the teachings in '781 patent, the protrusions recited in the instant invention rise *above* the surface to create an inner peripheral edge which defines the boundary within the contact surface containing a clean environment such as clean air or lubricating oil.³

The ‘781 patent fails to recite the elements of “textured features comprising protrusions extending outward from the surface of said contact surface” as set out in the broadest pending independent claim. The ‘781 patent to Grorich, therefore, cannot anticipate the claims pending in the instant application as it does not teach each and every element of the invention as claimed.

(7) The Claims Are Not *Prima Facie* Obvious

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the reference(s) themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ.2d 1438 (Fed. Cir. 1991); and *MPEP* § 2142; Establishing A *Prima Facie* Case Of Obviousness. The Examiner is reminded that if ONLY ONE of the above requirements is not met, then a *prima facie* case of obviousness does not exist.

As a threshold objection, the Applicants note the Examiner fails to provide any motivation to combine the cited references. . . beyond the Examiner’s own conclusory statement. This conclusory statement, however, does not provide the requisite evidentiary showing needed to advance a rejection under 35 U.S.C. 103(a). See, *In re Dembiczak*, 175 F.3d 994, 1000 (Fed. Cir. 1999).

² U.S. Patent 3,973,781 to Grorich, column 3, lines 4-12.


³ Application as filed on 07/17/200, page 7, line 23 - 24.

However even if improperly combined the cited art still fails to teach all of the elements of the claimed embodiments of the present invention. The pending rejection under 35 U.S.C. 103(a), therefore, needs be withdraw.

CONCLUSION

The Applicants believe that the arguments and claim amendments set forth above traverse the Examiner's rejections and, therefore, respectfully request all the pending rejections be withdrawn for the reasons set above and the pending claims be passed to allowance. Should the Examiner believe that a telephone interview would aid in the prosecution of this application, the Applicants encourage the Examiner to call the undersigned collect at 617.984.0616.

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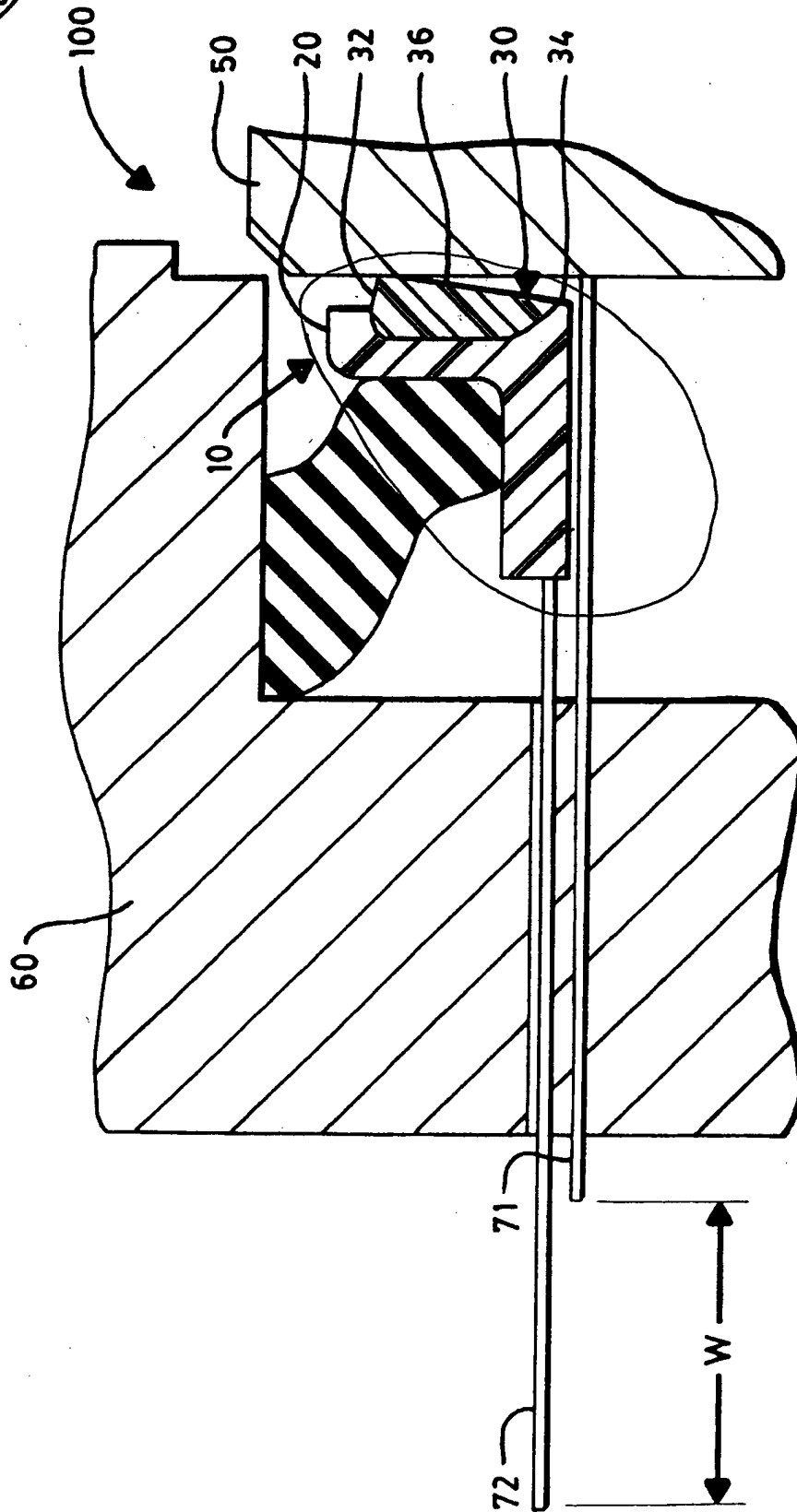


FIG. 7